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ABSTRACT

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Research Report

TITLE

Graduating Senior Ratings Relationship to Colleague Rating, Student Rating, Research Productivity and Academic Rank in Rating Instructional Effectiveness

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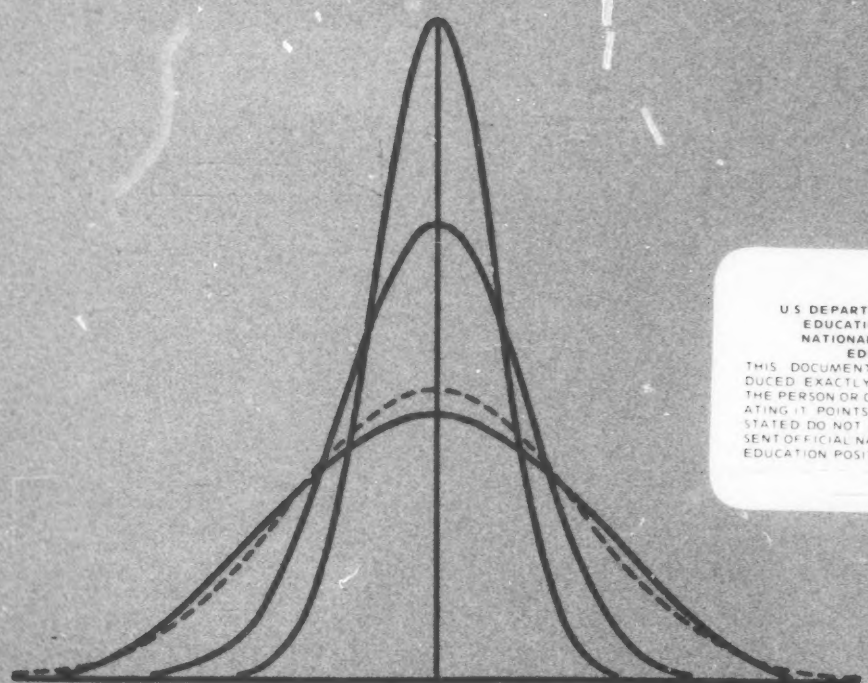

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Dear Colleague:

The enclosed research report was recently completed by members of the Measurement and Research Division of the Office of Instructional Resources and is enclosed for your information. The report contains an abstract summarizing the content.

If you should have any questions regarding the report, please feel free to contact the authors or me at 333-3490.

Cordially,

Lawrence M. Aleamoni

Lawrence M. Aleamoni, Head
Measurement and Research Division
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Enclosure

Abstract

Graduating senior ratings were added to colleague and currently enrolled student ratings (gathered on a group of 477 instructors in an earlier study) and then compared to the instructors' research productivity and academic rank. Graduating senior, colleague and student ratings were not found to be significantly related to the instructors' research productivity. However, senior ratings were significantly and highly related to colleague and currently enrolled student ratings but not to academic rank indicating that the reputation of the instructors may not be influencing seniors' judgments of excellence in teaching.

GRADUATING SENIOR RATINGS[1] RELATIONSHIP TO COLLEAGUE RATING, STUDENT RATING, RESEARCH PRODUCTIVITY AND ACADEMIC RANK IN RATING INSTRUCTIONAL EFFECTIVENESS

Lawrence M. Aleamoni and Makonnen Yimer

In a recent study by Aleamoni and Yimer (1973), teacher effectiveness was investigated with respect to the relationships between current student ratings, ratings by fellow teachers (colleagues), and research productivity. Their results suggested that teachers and students differ in the basis of their rating since teachers appeared to take into account academic rank of the instructor in their rating while the students did not. Research productivity was not related to either student or colleague rating. That study did not report ratings by graduating seniors and/or alumni.

McKeachie (1969) argued that students are more apt to accurately evaluate their teachers or the instruction they received after they have left college and gotten some perspective on what was really valuable to them. However, McKeachie was not able to supply evidence to support his contention. Drucker and Remmers (1950; 1951), however, conducted a study that asked alumni, ten years out of college, what they thought the most important qualities of a good instructor were and then compared their answers with current undergraduates' opinions. They found that there was a positive correlation between current student and alumni ratings of the same instructor indicating that the student ratings after they have left college are still similar to the ratings of students presently in college.

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[1]The authors are indebted to Professor Robert A. Waller for providing the Graduating Senior Rating data.

A more recent study by Gaff (1973) using graduating seniors' nominations of stimulating teachers from nine California institutions found "...a fair degree of overlap between the faculty nominated by students and those named by colleagues." No correlations, however, were presented.

Long after the Aleamoni and Yimer study was completed, data from a senior questionnaire used on graduating seniors in the College of Liberal Arts and Sciences (LAS) at the University of Illinois at Urbana-Champaign was made available to the authors. The Senior Questionnaire contained questions asking students to nominate their "most stimulating" and "least stimulating" teachers. A review of the literature indicated that no studies were available that concentrated on the concurrent relationship between graduating senior ratings, colleague ratings, current student ratings, research productivity and academic rank. Using the available data gathered from graduating seniors, this study was designed to examine these relationships.

Method

The method section of this study is identical to that described in the earlier study by Aleamoni and Yimer except that five additional variables are employed which were gathered from the LAS Senior Questionnaires administered to the 1969, 1970, 1971, and 1972 graduating seniors. The graduating seniors were asked to indicate their "most stimulating" and "least stimulating" teachers during their tenure at the University. Only those teachers who received "most stimulating" nominations were used since that was the same criterion used to select the faculty nominated group in the earlier study. Individual faculty members were rated according to the frequency of nomination which ranged from 1 to 55, 1 to 110, 1 to 54, and 1 to 52 for the 1969, 1970, 1971, and 1972 groups, respectively. The number of graduating seniors filling out

the questionnaire in 1969, 1970, 1971, and 1972 were 2,205, 2,245, 2,562, and 2,441, respectively.

A correlational analysis again was used along with a multiple regression on the variables of interest.

Results

A description of the variables analyzed as well as their means (M) and standard deviations (SD) is presented in Table 1. The distributions of senior ratings was positively skewed and was similar to that of the colleague rating. The 1970 senior rating exhibited the largest skewness. In Table 2, the data above the main diagonal represent the intercorrelations among the variables, while the data below the main diagonal represent the corresponding sample sizes.

Since the instructor was the focus of the ratings by both the graduating seniors and colleagues, Variables 10 (Advisor Instructor) and 15 (CEQ Instructor) will be used as measures of enrolled student ratings of teacher effectiveness in this study without considering the rest of the Advisor or CEQ variables.

Table 3 presents the intercorrelations of Variables 1, 3, 4, 7, 8, 10, 15, and 18. The correlation of the Senior Rating Total (Variable 8) with Advisor Instructor and CEQ Instructor is .26 and .17, respectively. The 1969 Senior Rating correlates .17 and .23 with Advisor Instructor and CEQ Instructor, respectively, while the 1972 rating correlates .19 and .38, respectively. The correlation of Variable 3 (Colleague Rating) with Academic Rank, Advisor Instructor, CEQ Instructor and Senior Rating Total is .20, .28, .27, and .42, respectively, and all of them are significant at the $p < .05$ level. The student-colleague correlation of .28 is significantly different from the senior-colleague correlation of .42 at the $p < .05$ level. Advisor Instructor, CEQ Instructor, Publications and Senior Rating in predicting Colleague Rating,

Table 1

Variable Description, Mean and Standard Deviation

Variable	N	M	SD
1. Academic Rank	477	3.83	1.17
2. Sex	477	1.12	.32
3. Colleague Rating	477	2.98	3.14
Senior Rating			
4. 1969	192	7.54	9.46
5. 1970	220	11.01	16.23
6. 1971	193	8.60	10.66
7. 1972	176	7.12	8.79
8. Total	256	26.50	37.22
Advisor Subscales			
9. Overall Evaluation of Course	474	3.11	.28
10. Instructor	474	3.22	.39
CEQ Subscales			
11. General Course Attitude	43	3.16	.35
12. Method of Instruction	43	2.84	.42
13. Course Content	43	2.97	.24
14. Interest and Attention	43	2.85	.42
15. Instructor	43	3.22	.34
16. Specific Items	43	2.95	.20
17. Total	43	3.00	.30
Publications			
18. Unweighted Sum	362	7.89	7.55
19. Weighted Sum I	362	28.32	28.99
20. Weighted Sum II	362	25.27	24.33

Table 2

Intercorrelations and Corresponding Sample Sizes

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1. Academic Rank		-.22	.20	-.06	-.06	-.08	-.14	-.06	.02	.03	-.30	-.29	-.17	-.26	-.05	-.14	-.23	.32	.31	.33
2. Sex	477		-.09	.02	-.05	-.07	-.04	-.06	.06	.03	.15	.13	.13	.05	.23	.19	.15	-.11	-.08	-.10
3. Colleague Rating	477	477		.45	.38	.40	.25	.42	.17	.28	.16	.30	.30	.23	.27	.29	.27	.07	.09	.08
Senior Rating																				
4. 1969	192	192	192		.79	.60	.40	.83	.04	.17	-.09	.11	-.13	.00	.23	.16	.06	-.02	.02	.00
5. 1970	220	220	220	177		.78	.56	.94	.16	.26	-.08	.00	-.27	-.04	.03	-.06	-.06	-.01	.02	.01
6. 1971	193	193	193	153	172		.71	.90	.13	.28	-.15	-.06	-.05	-.11	-.08	.06	-.09	-.10	-.09	-.10
7. 1972	176	176	176	142	156	147		.75	.09	.19	-.02	.21	-.10	.07	.38	.28	.16	-.08	-.09	-.09
8. Total	256	256	256	192	220	193	176		.15	.26	-.05	.14	-.07	.05	.17	.14	.07	-.05	-.02	-.04
Advisor Subscales																				
9. Overall Evaluation of Course	474	474	474	191	219	192	175	255		.84	.52	.48	.52	.44	.48	.56	.52	.01	.03	.02
10. Instructor	474	474	474	191	219	192	175	254	474		.53	.58	.54	.50	.56	.57	.58	-.02	.02	.00
CEQ Subscales																				
11. General Course Attitude	43	43	43	17	15	15	14	20	40	40		.87	.86	.94	.71	.84	.93	-.13	.03	-.04
12. Method of Instruction	43	43	43	17	15	15	14	20	40	40	43		.84	.92	.87	.87	.96	-.02	.09	.04
13. Course Content	43	43	43	17	15	15	14	20	40	40	43	43		.88	.79	.89	.93	.00	.16	.09
14. Interest and Attention	43	43	43	17	15	15	14	20	40	40	43	43	43		.75	.82	.96	-.10	.00	-.01
15. Instructor	43	43	43	17	15	15	14	20	40	40	43	43	43	43		.83	.88	.00	.09	.05
16. Specific Items	43	43	43	17	15	15	14	20	40	40	43	43	43	43	43		.93	.08	.20	.15
17. Total	43	43	43	17	15	15	14	20	40	40	43	43	43	43	43	43		-.04	.10	.04
Publications																				
18. Unweighted Sum	362	362	362	152	171	153	145	199	360	360	28	28	28	28	28	28	28		.88	.95
19. Weighted Sum I	362	362	362	152	171	153	145	199	360	360	28	28	28	28	28	28	28	362		.98
20. Weighted Sum II	362	362	362	152	171	153	145	199	360	360	28	28	28	28	28	28	28	362	362	

Table 3

Selected Intercorrelations

Variable	1	4	7	8	10	15	18	3
1. Academic Rank	1.00	-.06	-.14	-.06	.03	-.05	.32**	.20**
4. Senior Rating 1969		1.00	.40**	.83**	.17*	.23	-.02	.45**
7. Senior Rating 1972			1.00	.75**	.19**	.38	-.08	.25**
8. Senior Rating Total				1.00	.26**	.17	-.05	.42**
10. Advisor Instructor					1.00	.56**	-.02	.28**
15. CEQ Instructor						1.00	.00	.27*
18. Publications							1.00	.07
3. Colleague Rating								1.00

*p < .05
**p < .01

a multiple correlation and the weights for each prediction were computed. The multiple correlation was found to be .52 and the standardized and unstandardized regression equations are presented below:

$\tilde{Z}_y$ = (.2235) Academic Rank + (.0768) Advisor + (.1727) CEQ + (.0184) Publications + (.3849) Senior Rating

$\tilde{Y}$ = -7.3658 + (.5998) Academic Rank + (.6183) Advisor + (1.5949) CEQ + (.0077) Publications + (.0325) Senior Rating

Where

$\tilde{Z}_y$ = predicted Colleague Rating (standardized)

$\tilde{Y}$ = predicted Colleague Rating (unstandardized)

Discussion

The results presented indicate that even with the addition of senior ratings, the academic rank of an instructor is more highly related to publications than any of the other variables. Senior Rating also failed to show a significant relationship with publications. Senior Rating for the Total, 1969 and 1972 showed significant relationships to Colleague and Advisor Instructor ratings and high but not significant relationships to the CEQ Instructor variable.

The high relationship between colleague and senior ratings indicates that they are more similar in their judgments of good teachers than the currently enrolled students and colleagues are. This seems to imply that either; (a) graduating seniors have somewhat modified their attitudes regarding who the excellent teachers are so that they are more closely related to colleague perceptions, or (b) that graduating seniors and faculty have had more time to share opinions which may not be as readily available to currently enrolled students. It is interesting to note, however, that the senior ratings were also highly and significantly related to current student ratings. Another interesting result is the fact that the 1969 Senior Rating were more highly related to the Colleague rating than to the CEQ Instructor rating but the 1972 Senior Rating reversed that situation. This suggests that student ratings may be more stable over time than McKeachie expected especially if we realize that some of the current students who were rating in 1969 would be graduating seniors in 1972. This particular portion of the study seems to support the claims made earlier by Drucker and Remmers.

In spite of the high relationship between colleague and senior ratings, it still appears that students and teachers differ in the basis of their rating since colleagues appear to take into consideration the academic rank

of the instructor. The hypothesis in the earlier study by Aleamoni and Yimer that such a relationship is explainable in terms of reputation and that instructors who are at a university longer are more apt to be known to more colleagues, still appears tenable for colleague ratings but not for graduating senior ratings. It seems that graduating seniors are still relying on what they observed in the classroom in arriving at judgments of excellence in teaching.

The present study supports the conclusion reached by Gaff that senior ratings and colleague ratings are related. However, since no correlational data was provided by Gaff, we have no way of determining if the magnitude of our relationships is comparable.

The multiple correlation of .52 represents a significant increase over the multiple correlation of .40 found in the previous study and is largely due to the addition of the Senior Rating. As expected, the Senior Rating is the largest contributor to predicting Colleague Rating with Academic Rank and CSQ Instructor also contributing significantly.

This study has added a meaningful dimension to the earlier study by Aleamoni and Yimer by incorporating graduating senior rating data, however, the usefulness of such ratings needs to be more thoroughly explored. Issues such as; (a) why colleague and senior ratings are highly related but yet not similarly related to academic rank, (b) why ratings by seniors in the same year differ when compared to currently enrolled student ratings in earlier years, and (c) how stable are specific student ratings when they become seniors, also need to be investigated much more thoroughly.

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